

GY 6000 DSAX

Martin Diesel

INDEX

M 1.1	NOTE
M 2 - 2.1	SYMBOLS AND SAFETY PRECAUTIONS
M 2.5	IMPORTANT SAFETY INFORMATION
M 2.6	INSTALLATION ADVICE
M 2.7	INSTALLATION
M 3	PACKING
M 4.1	TRANSPORTING AND MOVING
M 6.9	CTM2 - ASSEMBLY
M 20.1	PREPARING THE UNIT
M 21.1	STARTING THE ENGINE
M 22.1	STOPPING THE ENGINE
M 31	LEGEND - CONTROLS
M 37	USING THE GENERATOR
M 39.6	ENGINE PROTECTION
M 40.2	TROUBLE SHOOTING
M 43	MAINTENANCE
M 43.1.1	MAINTENANCE
M 45	STORAGE
M 51	TECHNICAL SPECIFICATIONS
M 53	DIMENSIONAL DRAWING
M 60	ELECTRICAL SYSTEM: LEGENDE
M 61.1	ELECTRICAL SYSTEM: ENGINE
M 61.2	ELECTRICAL SYSTEM: GENERATOR
R 1	SPARE PARTS LIST
HP 10-11-12	EXPLODED VIEW - MACHINE
KA 13	EXPLODED VIEW - ACCESSORIES

INTRODUCTION

Dear Customer,

We wish to thank you for having bought our product. We have made it to the highest standards, and it will serve you for many years.

Before using the machine, please read this manual attentively. Follow the instructions to avoid problems, improper use of the machine, and incorrect maintenance.

The manual is an integral part of the machine and should be kept together with the machine.

Some of the figures contained in this manual are only to identify the described parts and may not correspond exactly to those on the machine in your possession.


GENERAL INFORMATION

In the envelope where you found this manual, there is also a manual for the engine. In some countries, the warranty card is also included, as well as tools or accessories, as may be required for the machine. Please check the contents carefully before disposing of the bag.

Our machines are designed specifically for the generation of electrical power for use in welding and/or power generation; USES OTHER THAN THOSE MENTIONED ARE NOT PERMITTED, and if used for such other uses the company cannot be responsible for damages to the machine, persons or things resulting from such use.

Our products are made in conformity with international safety norms and according to good engineering practice in order to prevent injury to persons or damage to things.

You are responsible to inform those working with the machine about the personal safety norms in force to protect them from injury.

 **Notice:** *in line with our policy of continuous improvement of our products, we reserve the right to introduce improvements, so that the machine and/or its accessories may not be exactly as shown in this manual.*




SYMBOLS IN THIS MANUAL

- The symbols used in this manual are designed to call your attention to important aspects of the operation of the machine as well as potential hazards and dangers for persons and things.

IMPORTANT ADVICE

- Advice to the User about the safety:

-  The information contained in the manual can be changed without notice.
Potential damages caused in relation to the use of these instructions will not be considered because these are only indicative.
Remember that the non observance of the indications reported by us might cause damage to persons or things.
It is understood, that local dispositions and/or laws must be respected.



WARNING

Situations of danger - no harm to persons or things

Do not use without protective devices provided

Removing or disabling protective devices on the machine is prohibited.

Do not use the machine if it is not in good technical condition

The machine must be in good working order before being used. Defects, especially those which regard the safety of the machine, must be repaired before using the machine.

SAFETY PRECAUTIONS



DANGEROUS

This heading warns of an immediate danger for persons as well for things. Not following the advice can result in serious injury or death.



WARNING

This heading warns of situations which could result in injury for persons or damage to things.



CAUTION

To this advice can appear a danger for persons as well as for things, for which can appear situations bringing material damage to things.



IMPORTANT



NOTE



ATTENTION

These headings refer to information which will assist you in the correct use of the machine and/or accessories.

SYMBOLS



STOP - Read absolutely and be duly attentive.



GENERAL ADVICE - If the advice is not respected damage can happen to persons or things.



HIGH VOLTAGE - Attention: High Voltage. There can be parts in voltage, dangerous to touch. The non observance of the advice implies danger to life.



FIRE - Danger of flame or fire. If the advice is not respected, fires can happen.



HEAT - Hot surfaces. If the advice is not respected burns or damage to things can be caused.



EXPLOSION - Explosive material or danger of explosion, in general. If the advice is not respected, there can be explosions.



WATER - Danger of short circuit. If the advice is not respected, fires or damage to persons can be caused.



SMOKING - Cigarettes can cause fire or explosion. If the advice is not respected, fires or explosions can be caused.



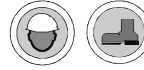
ACIDS - Danger of corrosion. If the advice is not respected, the acids can cause corrosion with damage to persons or things.



WRENCH - Use of tools. If the advice is not respected, damage can be caused to objects and to persons.

SYMBOLS WHICH INDICATE WHAT MUST BE DONE TO AVOID INJURY

Use only with safety clothing -



It is compulsory to use the personal protection means given in equipment.

Use with only safety material -



It is prohibited to use water to quench fires on the electric machines.

Use only with non-inserted voltage -



It is prohibited to make interventions before having disinserted the voltage.

No smoking -



It is prohibited to smoke while filling the tank with fuel.

SYMBOLS WHICH GIVE ADVICE ON HOW TO AVOID INJURY AND DAMAGE

Use only with safety tools, adapted to the specific use.

It is advisable to use tools adapted to the various maintenance works.

Use only with safety protections -



It is advisable to use protections suitable for the different daily checking works.

Use only with safety protections -



It is advisable to use all protections while shifting the machine.

Use only with safety protection -



It is advisable to use protection suitable for the different daily checking works.



IMPORTANT

- Read and understand these instructions.
- Before installing, operating or servicing this equipment, read the operating manuals of the welder and of the engine.
- Not observing the information in the manuals can result in personal injury and/or damage to the equipment and other property.
- Respect all safety regulations and laws when operating this equipment.



WARNING

Do not remove or disable protective devices

Removing or disabling protective devices on the machine is prohibited.

Do not use the machine if it is not in good technical condition

The machine must be in good working order before being used. Defects, especially those which regard the safety of the machine, must be repaired before using the machine.

ENGINE FUELLING

- Stop engine when fuelling.
- Do not smoke, avoid open flames and sparks, and do not use electric tools when fueling.
- Unscrew the fuel cap slowly to let out the fuel vapours.
- Do not over-fill the tank.
- Avoid spilling fuel on hot engine.
- Wipe up spilled fuel before starting engine.
- Shut off fuel cock, if present, or remove fuel from tank before moving machine

FOR BATTERY EQUIPPED UNITS ONLY

- Sparks may cause the explosion of battery vapours

WATER COOLED ENGINES ONLY

- Slowly unscrew the cooling liquid cap of a hot engine to allow vapours to escape.
- Hot vapor and heated cooling liquid under pressure can burn face, eyes, skin.



FIRST AID. In case the operator should be sprayed by accident, from corrosive liquids a/o hot toxic gas or whatever event which may cause serious injuries or death, predispose the first aid in accordance with the ruling labour accident standards or of local instructions.

Skin contact	Wash with water and soap
Eyes contact	Irrigate with plenty of water, if the irritation persists contact a specialist
Ingestion	Do not induce vomit as to avoid the intake of vomit into the lungs, send for a doctor
Suction of liquids from lungs	If you suppose that vomit has entered the lungs (as in case of spontaneous vomit) take the subject to the hospital with the utmost urgency
Inhalation	In case of exposure to high concentration of vapours take immediately to a non polluted zone the person involved



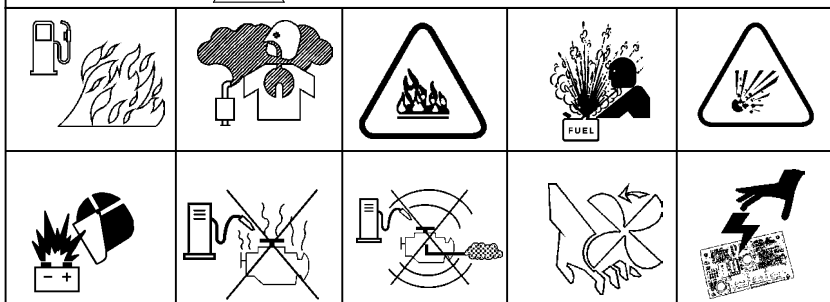
FIRE PREVENTION. In case the working zone, for whatsoever cause goes on fire with flames liable to cause severe wounds or death, follow the first aid as described by the ruling norms or local ones.

EXTINCTION MEANS

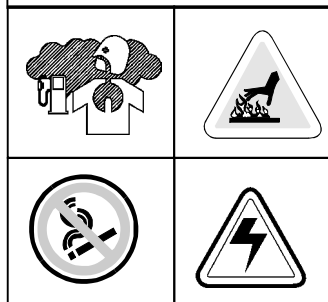
Appropriated	Carbonate anhydride (or carbon dioxide) powder, foam, nebulized water
Not to be used	Avoid the use of water jets
Other indications	Cover eventual shedding not on fire with foam or sand, use water jets to cool off the surfaces close to the fire
Particular protection	Wear an autorespiratory mask when heavy smoke is present
Useful warnings	Avoid, by appropriate means to have oil sprays over metallic hot surfaces or over electric contacts (switches, plugs, etc.). In case of oil sprinkling from pressure circuits, keep in mind that the inflammability point is very low.



WARNING



CAUTION

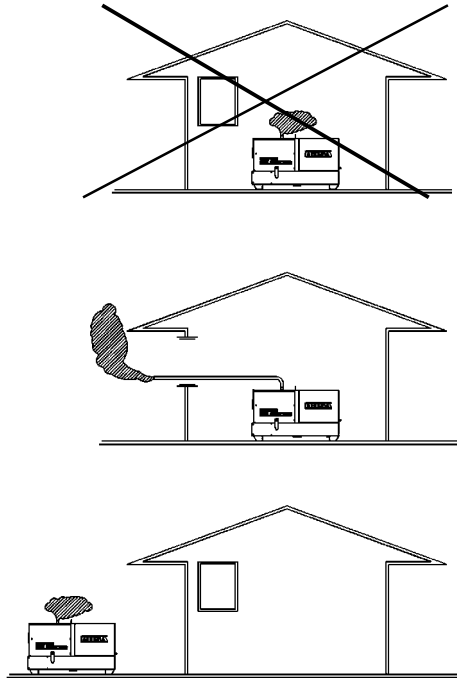


WARNING

THE MACHINE MUST NOT BE USED IN AREAS WITH EXPLOSIVE ATMOSPHERE

DIESEL ENGINES

- Use in open space with fresh air flow or vent exhaust gases far from the work area.



Make sure that the machine does not move during operation.

Protect the machine from rain and do not put it in a location where there is danger of flooding.

Water infiltration can cause short circuits, which can be dangerous for persons and can damage the machine.



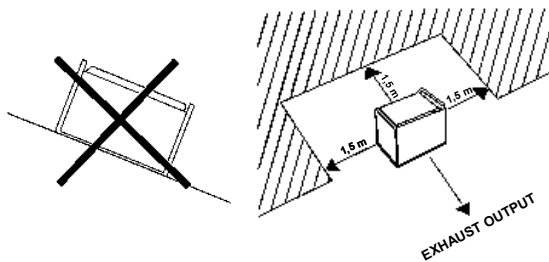
The degree of protection, of the machine is written the rating plate and in this manual at the "Technical Data" page.

MOVING THE MACHINE

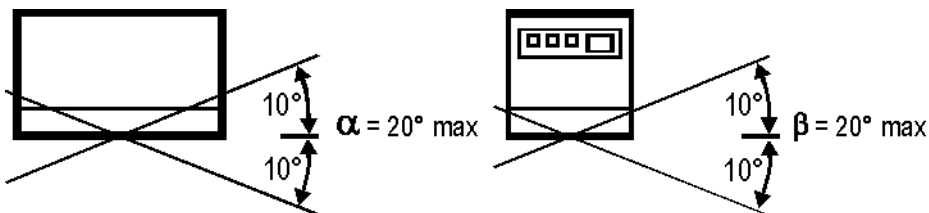
Before moving the machine turn off the engine and disconnect all cables, which could impede the move.

POSITIONING THE MACHINE

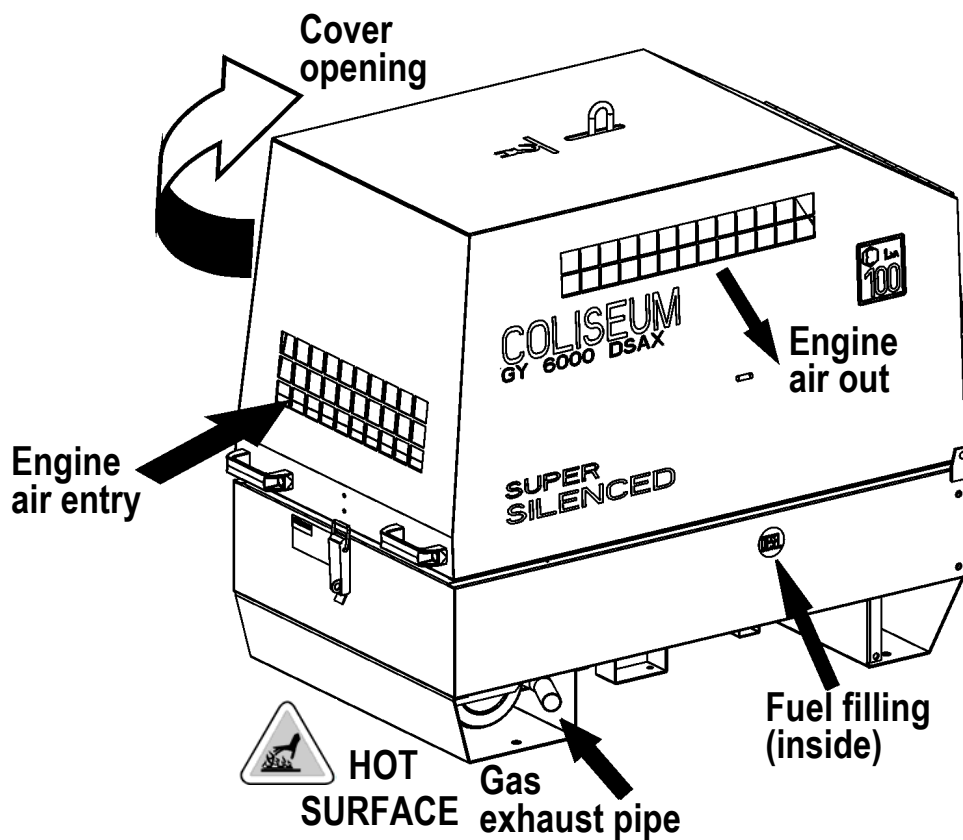
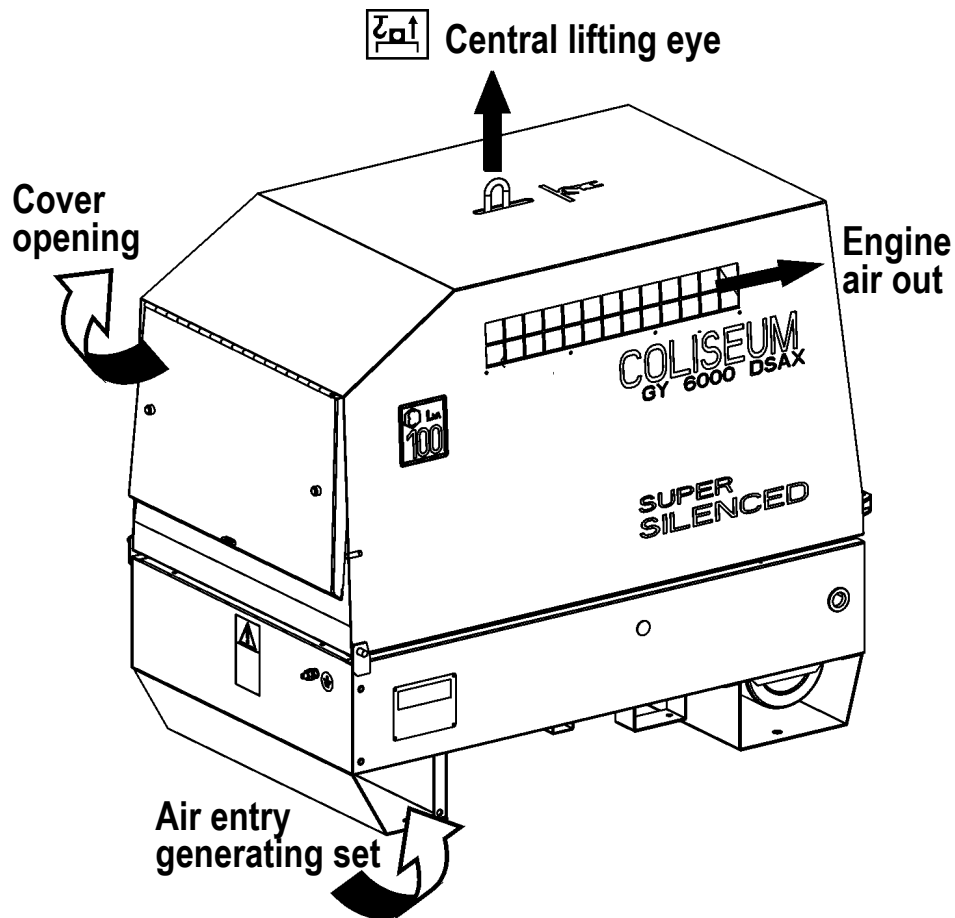
Place the machine on a level surface at a distance of at least 1,5 m from buildings or other structures.



If the surface is not level be sure that the angle of the machine does not exceed the values shown in the drawings below.

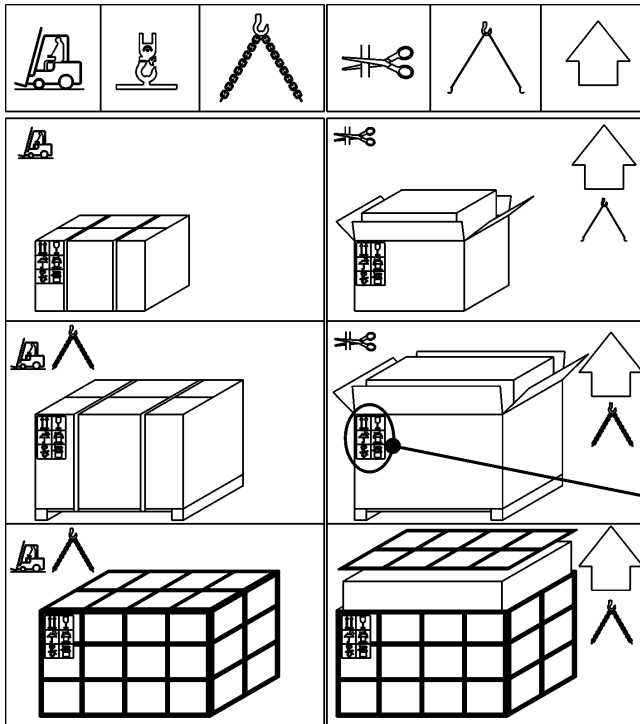


Assure that the hot air and/or exhaust gas from the machine are vented and are not recirculated in the machine. Hot air and/or exhaust gas which is recirculated will cause overheating of the machine and poor combustion in the engine





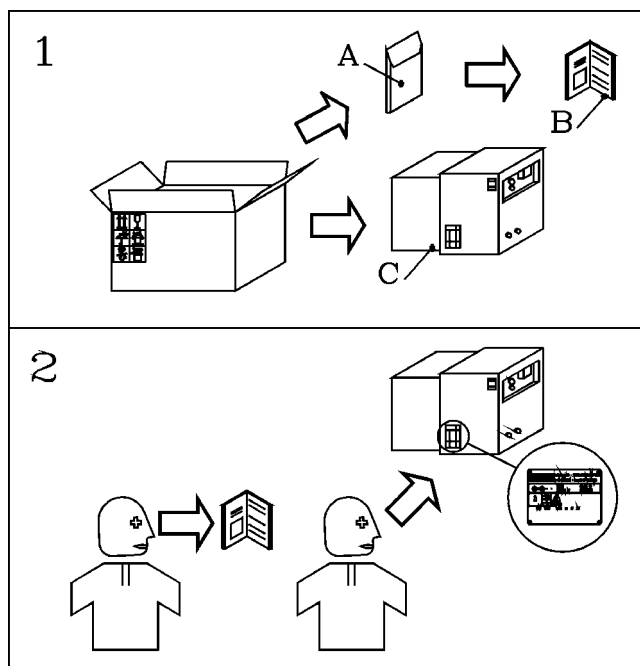
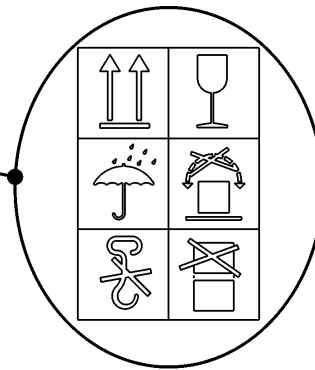
GENERAL PACKING INFORMATION



Upon receipt of the goods make sure that the product has not been damaged during transport. In case of damage or missing items you must inform your freight forwarder immediately.



Packing materials must be disposed of according to local regulations.



UNPACKING THE MACHINE

- 1) Take the machine (C) out of the carton. Locate the User's Manual (B), which is packed together with the engine manual and accessories in a plastic envelope (A). This envelope may be under or inside the machine.
- 2) Check the rating plate on the machine and confirm that the serial number and model are the same as shown on the packing note/invoice.

NB.: For further information on preparing the unit for use refer to the related parts of this manual.





NOTE

In case you should transport or move the machine, keep to the instructions as per the figures.

- Make the transportation when the machine has **no** petrol in its tank, **no** oil in the engine and and electrolyte in the battery.

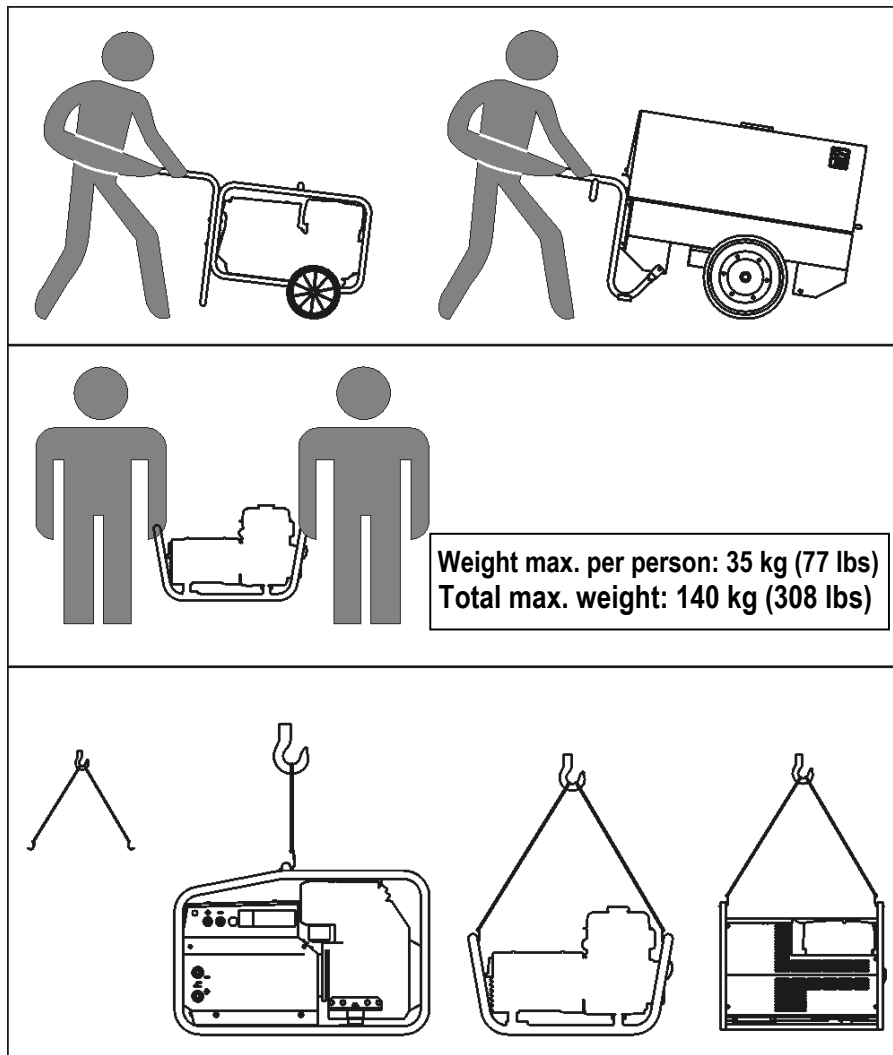
Be sure that the lifting devices are: correctly mounted, adequate for the weight of the machine with it's packaging, and conform to local rules and regulations.

Only authorized persons involved in the transport of the machine should be in the area of movement.

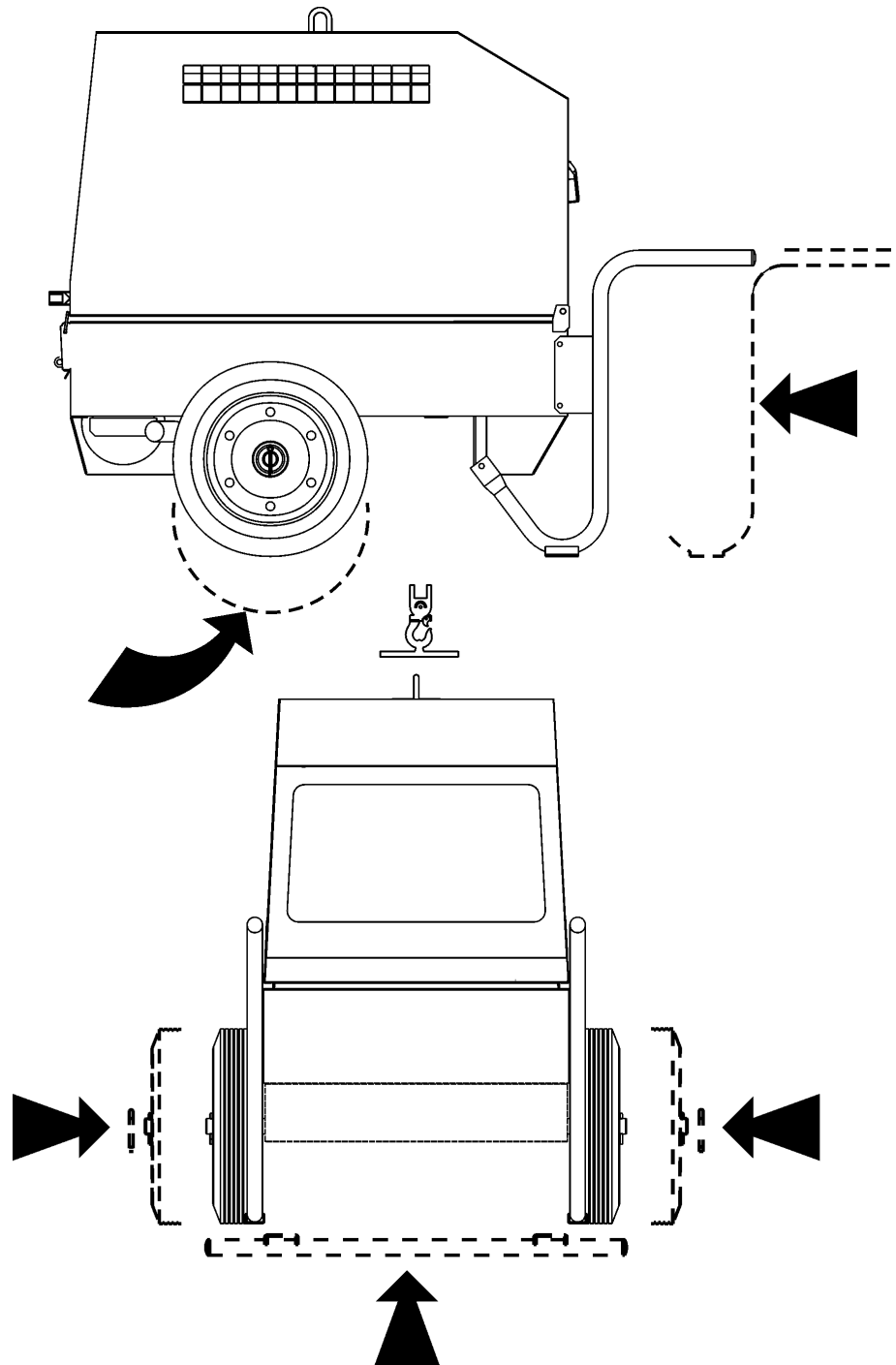
DO NOT LOAD OTHER PARTS WHICH CAN MODIFY WEIGHT AND BARICENTER POSITION.

IT IS STRICTLY FORBIDDEN TO DRAG THE MACHINE MANUALLY OR TOW IT BY ANY VEHICLE (model with no CTM accessory).

If you did not keep to the instructions, you could damage the structure of the machine.



Note: Lift the machine and assemble the parts as shown in the drawing



ATTENTION

The CTM accessory cannot be removed from the machine and used separately (actioned manually or following vehicles) for the transport of loads or any-way for used different from the machine movements.





BATTERY

The battery included with this generator is an Absorbent Glass Mat (AGM) type battery. It does not require any maintenance and cannot leak even if turned on it's side.



FUEL

Fill the tank with good quality diesel fuel.

ATTENTION: Diesel fuel is highly inflammable; before filling the tank, stop the engine. Do not fuel in the presence of open flames.



If fuel is spilled on the engine, clean it immediately before starting up the engine.

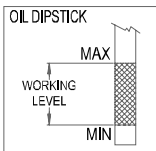


GROUND CONNECTION

It is obligatory to connect the ground connection point by means of a sure efficient cable (please follow the local installation rules and/or regulations in force) in order to integrate or ensure the working of various electric protection devices referring to the several distribution systems TT/TN/IT.



LUBRICANT



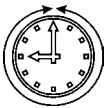
Check the level of the engine oil using the appropriate oil dipstick: the level should be between the minimum and maximum marks. If necessary, add more oil.

RECOMMENDED SAE VISCOSITY GRADES

For the type and viscosity of oil refer to owner's manual for the engine (supplied with the machine). It is recommended that 15W40 oil be used in the YANMAR diesel engine.

NOTE: Before starting the engine read the instructions in the owner's manual for the engine.





Control these items daily



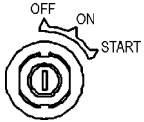
NOTE

Do not alter factory adjustments and do not touch sealed parts.

STARTING

Make sure that the accelerator lever or the switch is at its minimum setting.

Insert the electric protection device (D-Z2-N2) lever towards above.



Open the fuel valve

Put the engine accelerator in the "Stop" position

Turn the ignition key (Q1) to the "Start" position until the engine starts and then release it



NOTE: for security the starter key should be kept by qualified personnel.

Once the engine has started let it run at low speed for some minutes to warm it up.

To use accelerate the engine to maximum with the accelerator lever.



CAUTION

If the engine fails to start, do not crank for more than 15 seconds.

Wait at least 4 minutes before trying again.



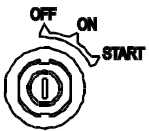
CAUTION

RUNNING-IN

During the first 50 hours of operation, do not use more than 60% of the maximum output power of the unit and check the oil level frequently.

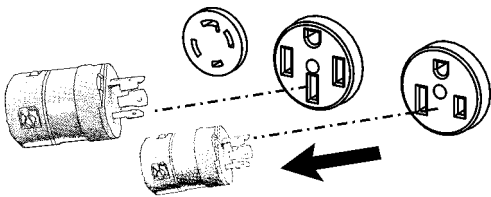
☞ Before stopping the engine **you must:**

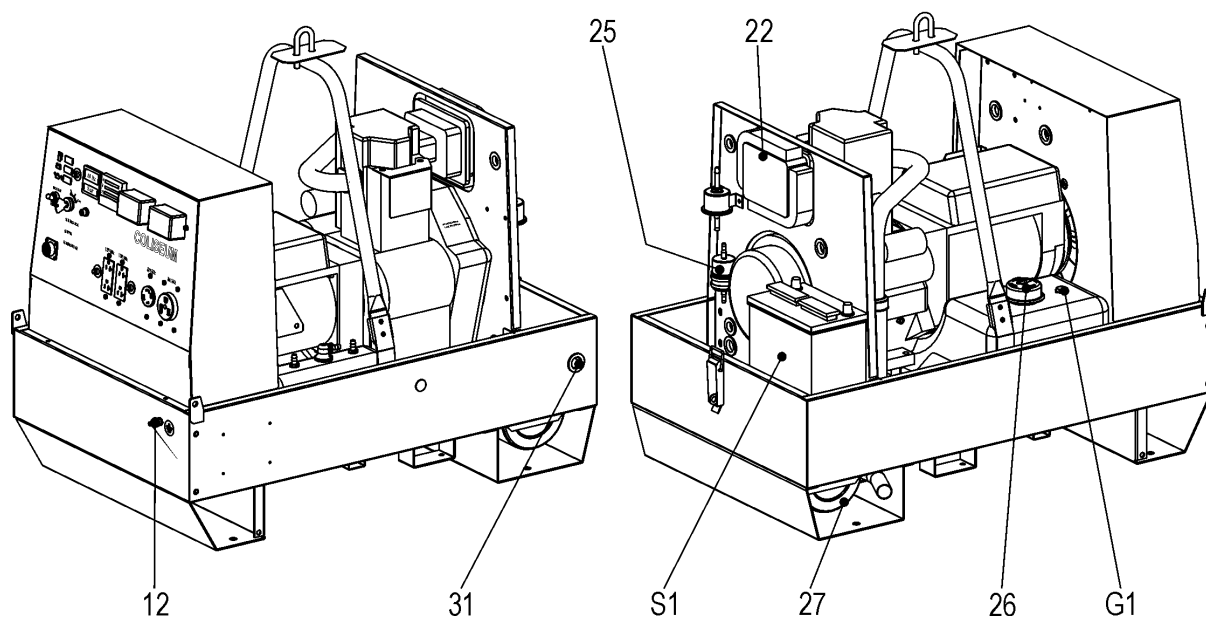
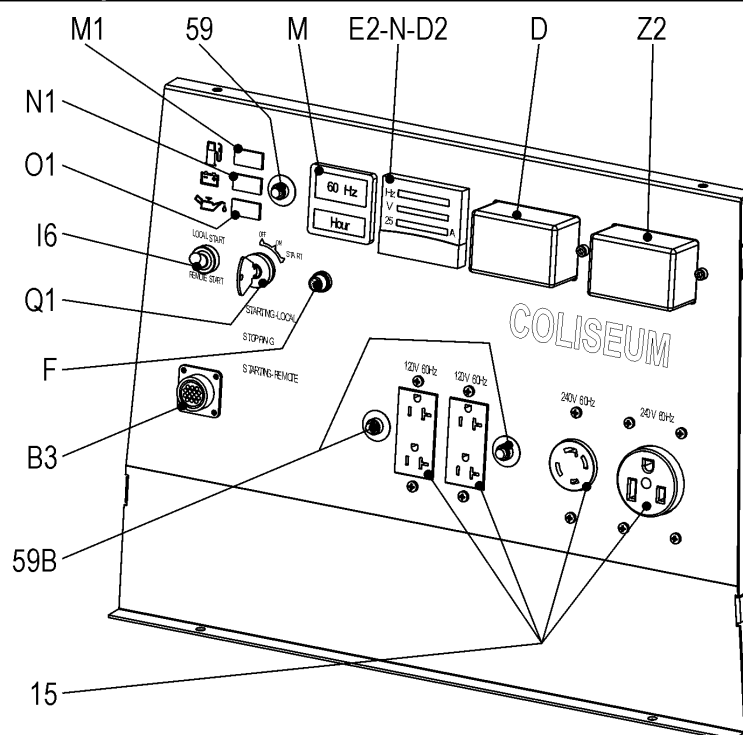
- turn off or disconnect the load or disinsert the electrical protection device (D-Z2-N2) by moving the lever downward.
- let the engine idle for a few minutes.



Put the engine accelerator in the "Stop" position
Turn the ignition key (Q1) to the "OFF" position.
Close the fuel valve.

Remove the plugs.





DESCRIPTION	12	Earth terminal	E2	Frequency meter
	15	A.C. socket	F	Fuse
	22	Engine air filter	G1	Fuel level transmitter
	25	Fuel prefilter	I6	Start local/Remote control
	26	Fuel tank cap	M	Hour counter
	27	Muffler	M1	Warning level light
	31	Oil drain tap	N	Voltmeter
	59	Battery charger thermal switch	N1	Battery charge warning light
	59B	Aux current circuit breaker	O1	Oil pressure warning light
	B3	Connector	Q1	Starter key
	D	Ground fault interrupter (30 mA)	S1	Battery
	D2	Ammeter	Z2	Thermal magnetic circuit breaker

In no case should the generator output be connected to the mains or any other source of electrical energy.



ATTENTION

Once the machine is running (see page M 21) the sockets are live even if no load is attached.

USING THE GENERATOR

- Make sure the unit is properly grounded.
- See pages M20, 21 for instructions on preparing, starting and stopping the engine.

Nominal voltage	Maximum variation from nominal	
	asynchronous	Synchronous
110V	±10%	±5%
230V	±10%	±5%
230V	±10%	±5%
400V	±10%	±5%

- Connect the load to the generating set sockets. Be sure to use cables of the correct size for the load.

The green lamp, located above the AC sockets indicate that there is voltage at the sockets.

Note: if the green lamp does not light up, check if the overload protection and/or GFI has been activated. If they are inserted, check that the engine is running at maximum speed.

When drawing power from more than one socket, the total power being used cannot exceed the rating shown on the data plate. Exceeding the maximum rating of the generator can damage the engine.

THERMAL OVERLOAD PROTECTION

When the socket is overloaded, the thermal overload protection device cuts in and stops the current.

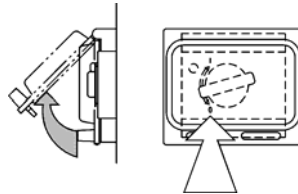
In this case, disconnect the load and reset the thermal overload protection device by pressing the button or the "ON" switch.

If the protection continues to shut off, check the load, cables, connections, etc., to find the fault, and, if they are OK, call an authorized Service Center.



Do not manually hold the button or switch in the "ON" position if it will not hold by itself. Doing so prevents it from cutting off the current and will result in damage to the generating set.

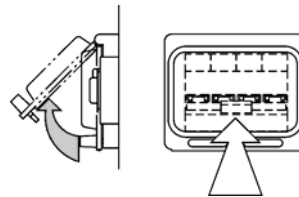
GROUND FAULT INTERRUPTER SWITCH (GFI)



Turn on the GFI safety-switch by pushing it upwards.

The GFI is a safety device which protects the circuit in the event of a malfunction. In this case, the switch disconnects the three and single-phase circuit when in any part of the electric connections a current leakage of more than 30 mA occurs.

THERMAL MAGNETIC BREAKER



Turn on the thermal magnetic breaker by pushing it to the ON position.

The thermal-magnetic breaker is a safety device which protects the circuit in the event of a malfunction. In this case, the switch disconnects single-phase circuit when in any part of the electric connections a short circuit or a current absorption occurs above the data specified on the label of the unit.



Hour-counter, which indicates the hours of effective operation of the unit;



The engine is equipped with a system which shuts down the engine in the event the oil pressure is too low. Low oil pressure is also indicated by the red warning lamp on the control panel.



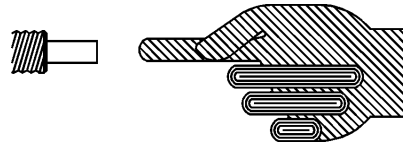
There is also a red battery charger warning lamp on the control panel which lights up if the battery is not being charged.



There is a thermal protection device to protect the battery in case there is too much charging current.



The thermal protection is reset by pressing the button.



If the thermal protection should continue to intervene, check:

- the battery charger and its connections
- the charge condition of the battery.

Once the cause of the problem has been removed, stop the engine by turning the starter key to the "OFF" position and restart the engine. In this way the protection will be assured.

The above mentioned devices function when the ignition is turned on.

PROBLEM	POSSIBLE CAUSE	WHAT TO DO
SYNCHRONOUS ALTERNATORS		
No output	1) Overload - circuit breaker activated	1) Remove the load and insert the circuit breaker. Reconnect the load. If it activates again check the rating of the load and the wiring between load and generator.
	2) GFI or Isometer have been activated	2) Remove the load and reset Isometer or GFI. Check without the load. If they activate there is an isolation fault or leakage to ground in the generator or internal wiring. If not, reconnect the load. If they are activated with the load attached there is an isolation fault or leakage to ground in the load or related cables.
	3) Stator burned out	3) Disconnect the load and see if the voltage is normal. If there is not output replace the alternator.

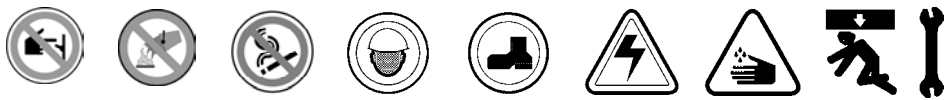
WARNING		
	<ul style="list-style-type: none"> Maintenance and repair work should only be done by qualified personnel. Stop the engine before doing any work on the machine. If for any reason the machine must be operated while working on it, be careful not to touch rotating parts, hot surfaces, live wires, etc. which may be unprotected. Remove protective guards only when necessary to perform maintenance and replace them immediately after the maintenance is completed. Use suitable tools and wear suitable clothes. Do not modify the machine without prior authorization. 	
MOVING PARTS can injure		HOT surface can hurt you

MAINTENANCE OF THE MACHINE

Maintenance refers to all operations regarding the control and replacement of mechanical and electrical parts subject to wear. In addition it refers to the control and topping up or replacement of fluids such as fuel, oil and battery acid, and the regular cleaning of the machine.

Repairs refers to the substitution of worn or damaged parts and repairs should be carried out by Authorized Service Centers.

Refer to the Engine Manufacturer’s Manual for the maintenance instructions for the engine. Periodic maintenance should be performed according to the schedule shown in this manual.



ELECTRIC START UNITS

The battery included with this generator set does not require any regular maintenance. The battery is automatically charged while the engine is running at speed.

☞ **N.B.:** In the models with safety protections, in case the battery is not being charged, check the thermal protection or fuse.

PROCEDURE FOR RECHARGING A BATTERY

The battery can be recharged with any commercial battery charger. However prolonged recharging at voltages above 14.8V can be harmful to the battery.

SYNCHRONOUS ALTERNATOR

No maintenance is necessary, as the alternator has no brushes or slip rings, and there are no devices for regulation of the output.

WARNING LABELS AND DECALS

Check warning labels and decals once a year and **replaced** if missing or unreadable.

CABLES AND CONNECTIONS

Periodically check the condition of the cables and tighten the connections.

DRY AIR FILTER (CLEANING)

Replace the air filter cartridge every 200 hours when using the unit in a clean environment.

In a dusty environment, the filter cartridge must be replaced every 100 hours.



IMPORTANT



When carrying out maintenance operations be careful to avoid polluting the environment with the materials used during maintenance. Follow all local health and safety regulations.



In case the machine will not be used for more than 30 days, it should be stored in a suitable area where it is protected from the elements to prevent rusting, corrosion and other damage to the machine.

DIESEL ENGINES

If the machine will be stored for short periods of time it is advisable to start the engine every 10 days and operate it for 15-30 minutes under load. This will distribute the oil, recharge the battery and prevent blockage of the injection system.

For long periods of storage, refer to the engine manufacturer's manual.

Clean the machine carefully.

Cover the machine with a plastic cover and store in a dry place.



IMPORTANT



When carrying out the operations to prepare the machine for storage, be careful to avoid polluting the environment with the materials used during maintenance. Follow all local health and safety regulations.



GY 6000 DSAX TECHNICAL SPECIFICATIONS

M
51
GB

The generating set GY 6000 DSAX transforms the mechanical energy generated by an internal combustion engine into electric energy through an alternator.

They are designed for industrial and professional use. The engine and alternator are directly coupled and mounted on a steel frame using elastic supports which reduce vibration and noise.

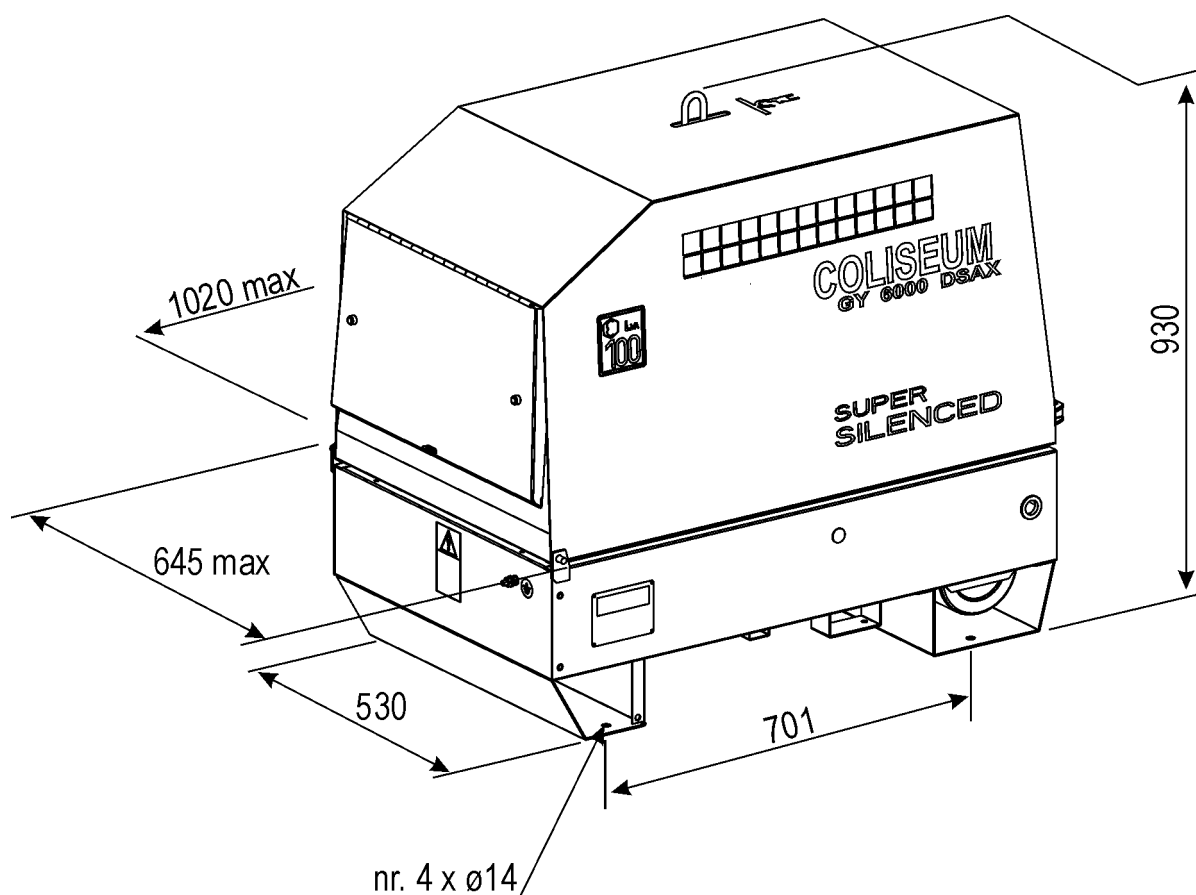
ALTERNATOR	Type: 1-phase, synchronous, self-excited, self-regulated, brushless				
	Insulation	class	H		
	OUTPUT			M240V	M120V
	Duty cycle	%		100	100
	Output	KVA		5	5
	Output	kW		5	5
	Voltage	V		240	120
	Current	A		21	42
	Frequency	Hz		60	60
	Cos Ø			1	1
ENGINE	Make		YANMAR		
	Model		L 100 EE		
	Type		4 – stroke		
	Displacement	liter (cc)	0.406 (406)		
	Cylinder	nr.	1		
	Power (**)	kW (HP)	7.4 (10)		
	Speed	rpm	3600		
	Cooling system		air		
	Engine oil capacity	liter / gal.	1.6 / 0.42		
	Starter		electric		
	Fuel		diesel		
GENERAL SPECIFICATION	Protection	IP	23		
	Battery	12V	33Ah		
	Dry weight (*)	Kg / lbs	200 / 440		
	Dimensions Lxwxh (*)	mm/ inches	1020 x 645 x 930 40.16 x 25.4 x 36.61		
	Fuel tank capacity	liter \ gal.	23 / 6		

Note : M = single-phase	(*) = Above values are valid without accessory CTM2 (**) = Maximum output according to ISO 3046/1
----------------------------	------------------------------------------------------------------------------------------------------

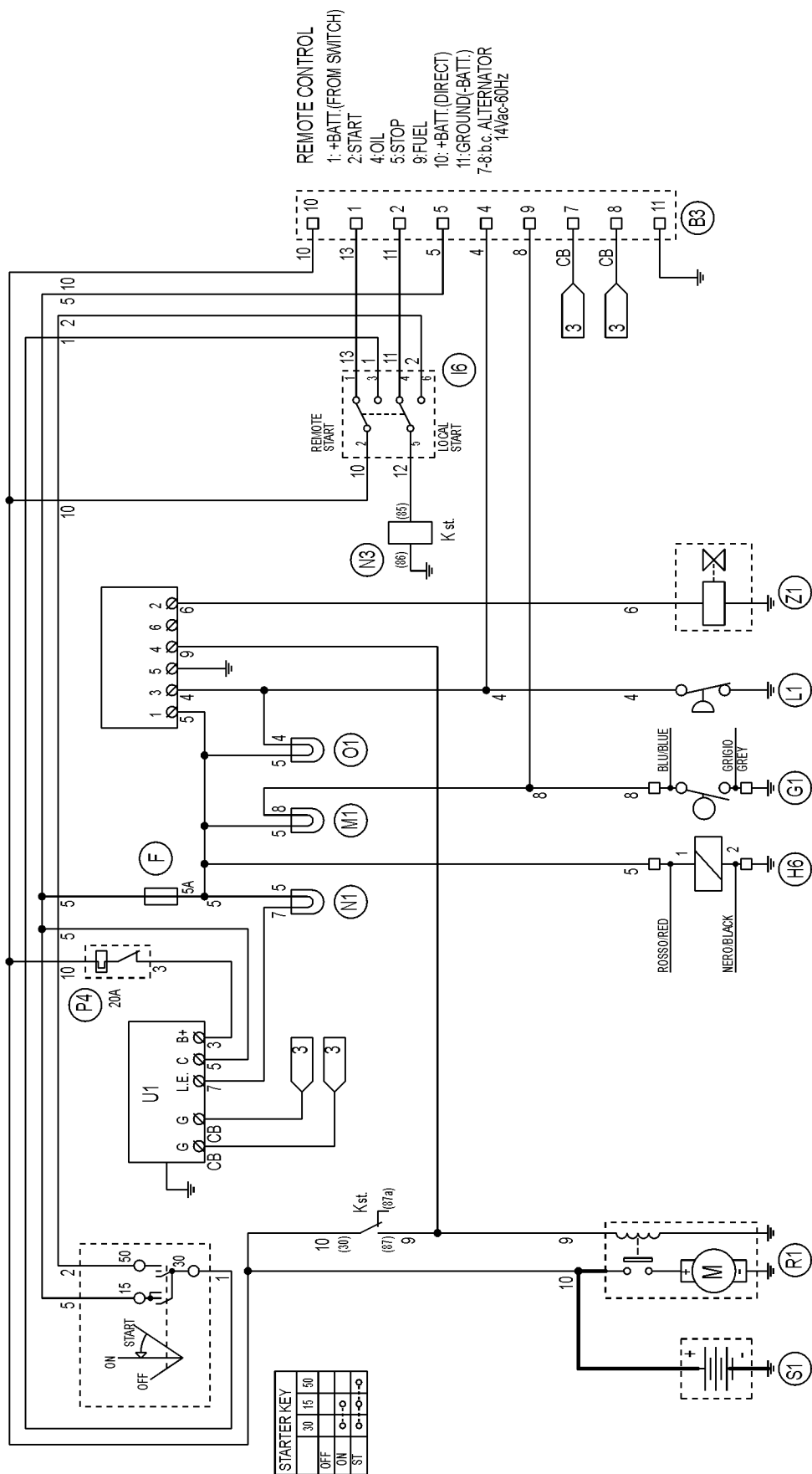
OUTPUT

The output indicated is guaranteed at 20°C and at an atmospheric pressure of 760 MM-HG (sea level) using #2 diesel fuel (DF-2) Output will be 20% less when using JP-8 fuel. Output is derated for temperature and elevation as follows.
3% for each 10°C above 20°C and 1.3% for every 100m above sea level.

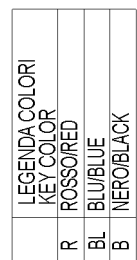
DIMENSIONS



A: Alternator
C: Capacitor
D: G.F.I.
F: Fuse
H: 230V 1phase socket
I: 110V 1-phase socket
M: Hour-counter
G1: Fuel level transmitter
L1: Oil pressure switch
M1: Fuel warning light
N1: Battery charge warning light
O1: Oil pressure warning light
R1: Starter motor
S1: Battery
U1: Battery charge voltage regulator
Z1: Solenoid valve
Z2: Thermal magnetic circuit breaker
B3: E.A.S. connector
N3: Relay
P4: Circuit breaker
H6: Fuel electro pump 12V c.c.
I6: Start Local/Remote selector
Q6: Hz/V/A analogic instrument



Exp.	Modifica	Dis.	Appr.
Exp.	Modifica	Dis.	Appr.
Denominazione:	Engine Yanmar L100AE (vers. ESIEAS)	Progetto:	35672.prg
Da Pag. From Page		Page n°	2
Ala Pag. To Page		Page n°	3
Macchina:	GY 6000 DSA	Dis. n°	35672.S.010
Designatore:	Leporace N.	Dis. n°	35672.S.010
Machine:		Dis. n°	35672.S.010
Machine:		Dis. n°	35672.S.010

[illegible]

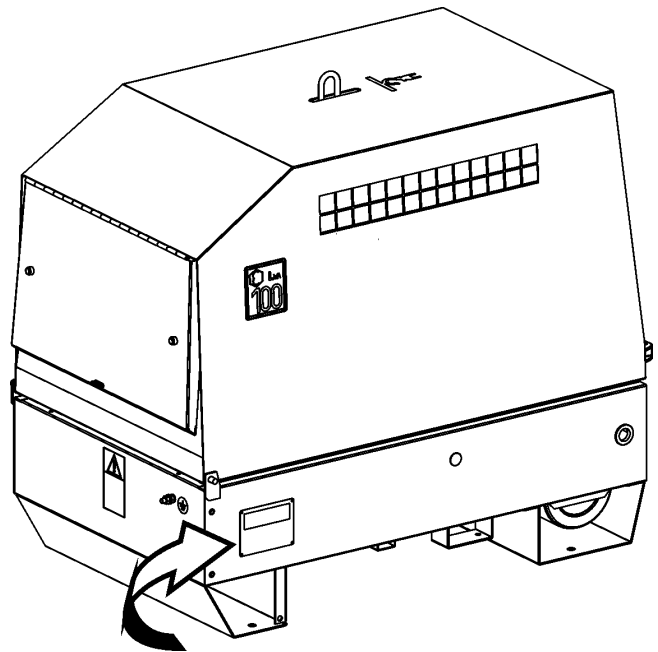
The company guarantees that any request for spare parts will be satisfied.

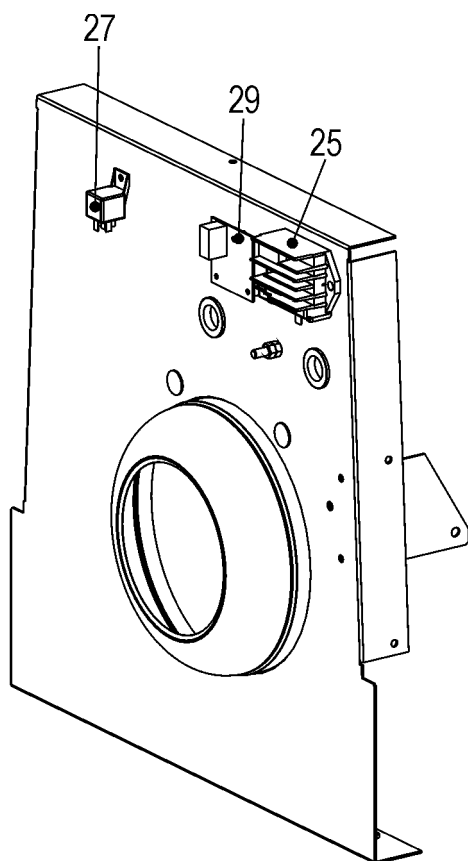
To keep the machine in full working order, when replacement of company spare parts is required, always ask for genuine parts only.

☞ The requested data are to be found on the data plate located on the machine structure, quite visible and easy to consult. ☼

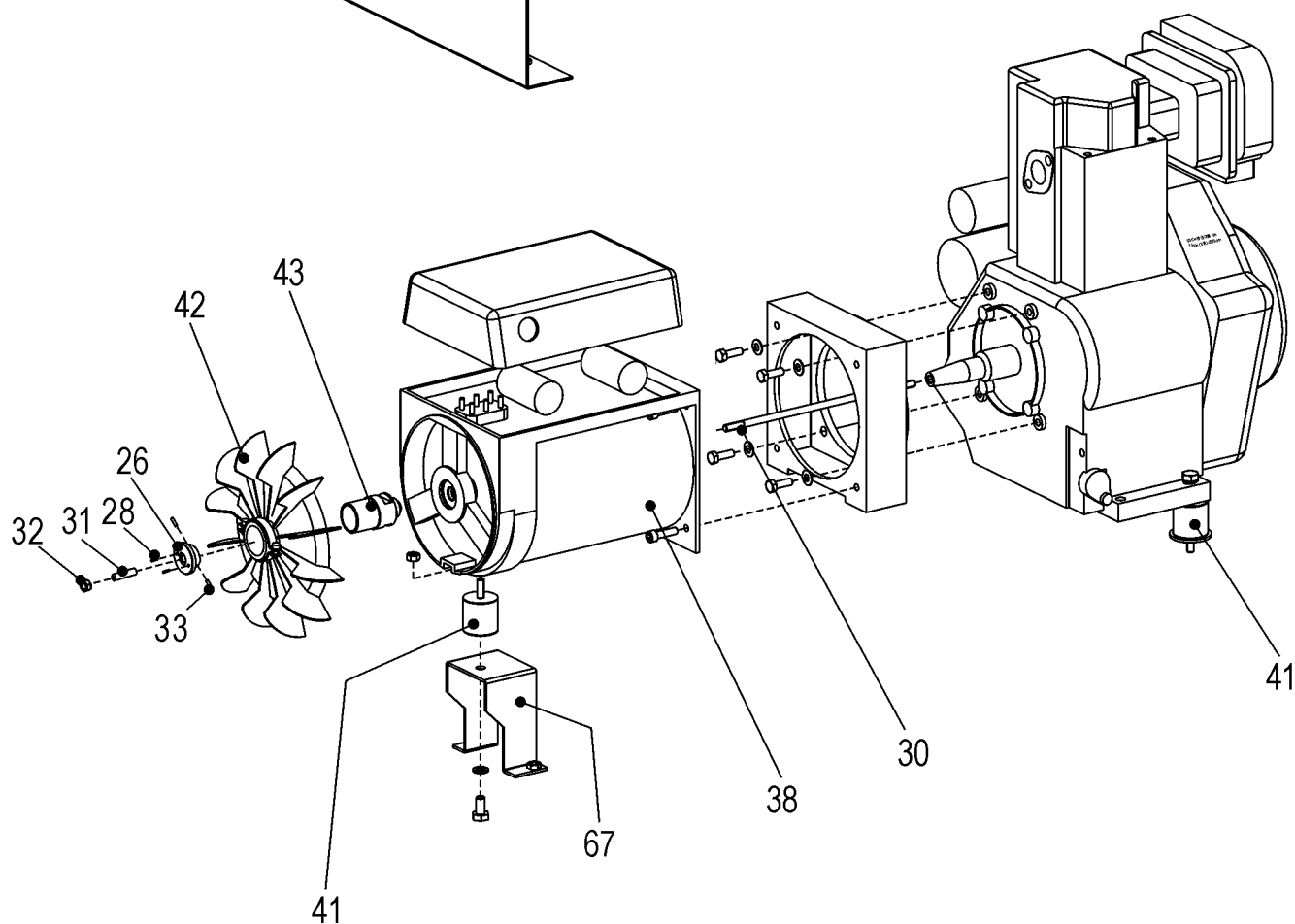
When ordering spare parts, it is recommended to indicate:

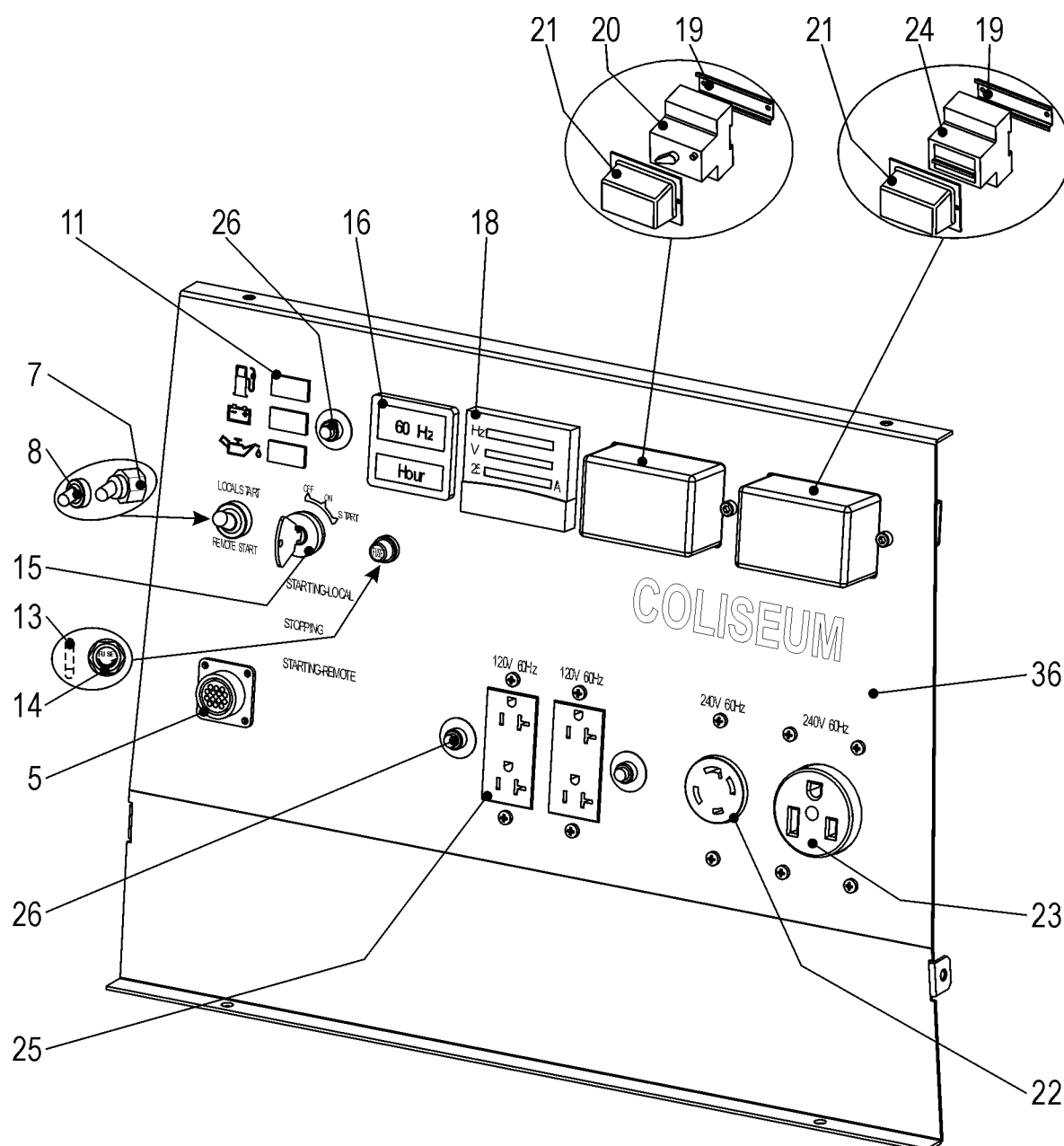
- 1) ☼ serial number
- 2) ☼ model generating set
- 4) ◆ position no.
- 5) quantity



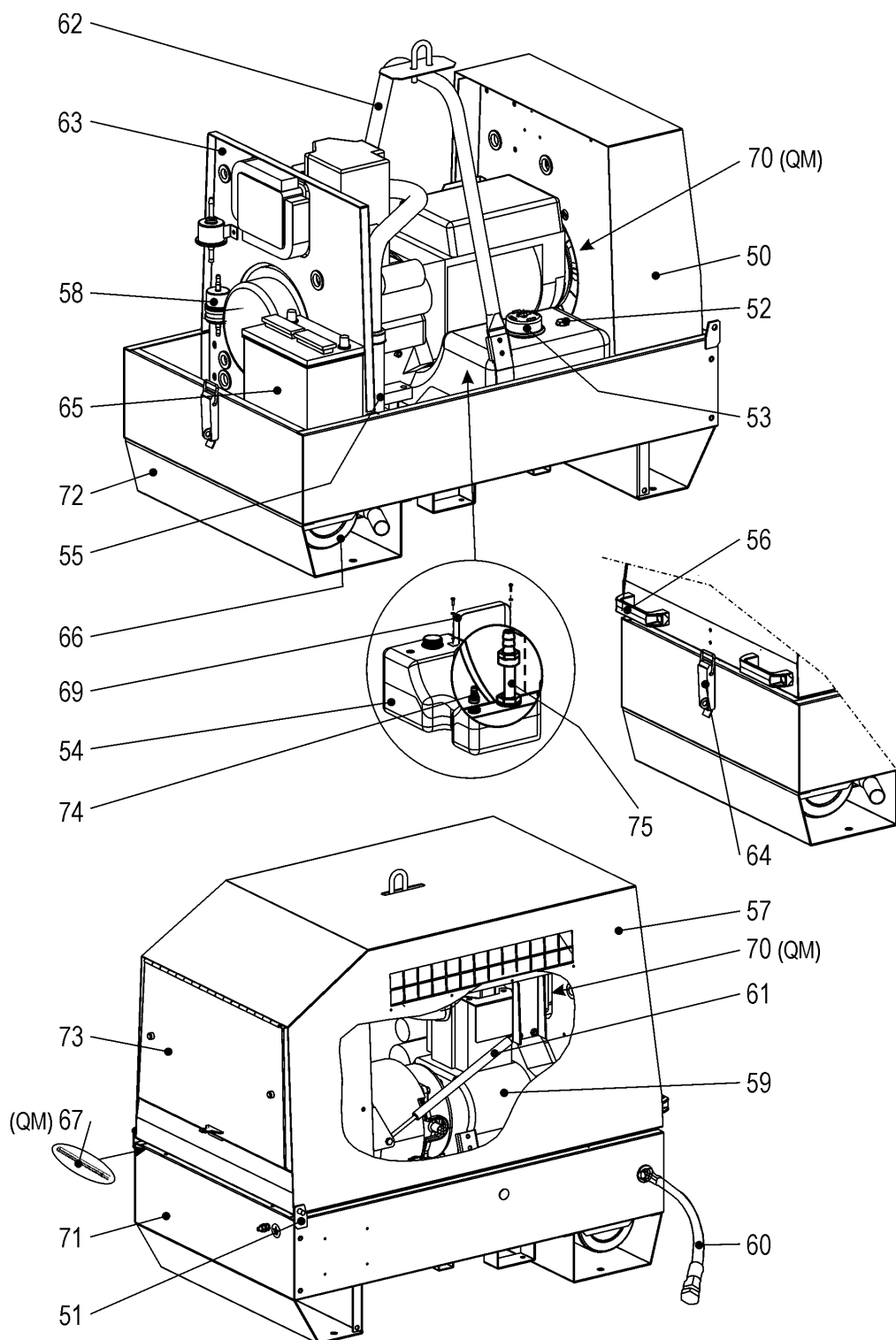


POS.	CODE
25	256022275
26	SP4059
27	306479199
28	6078010
29	209719850
30	271723036
31	6060140
32	6028120
33	SP4060
38	256603100
41	356321035
42	105111290
43	356363039
67	HP0073101

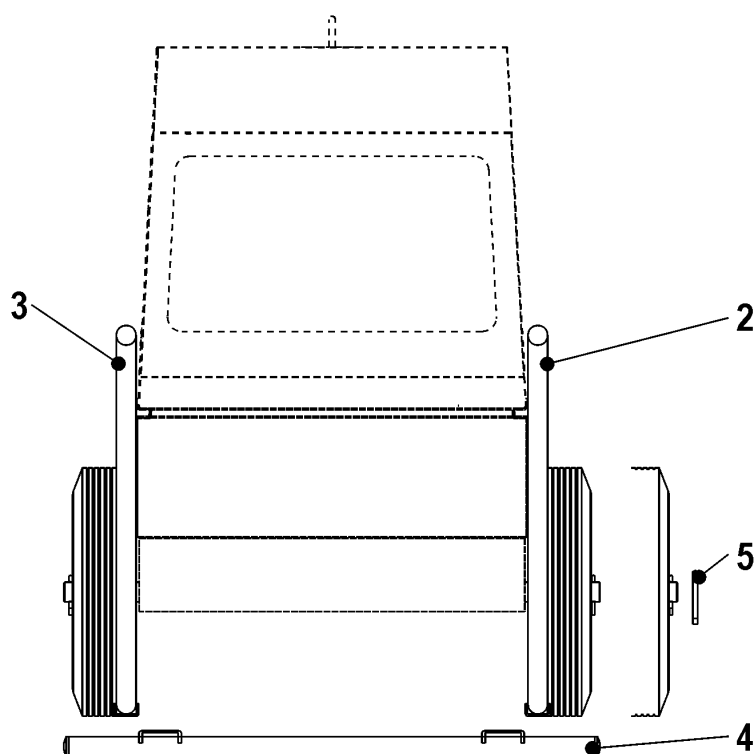
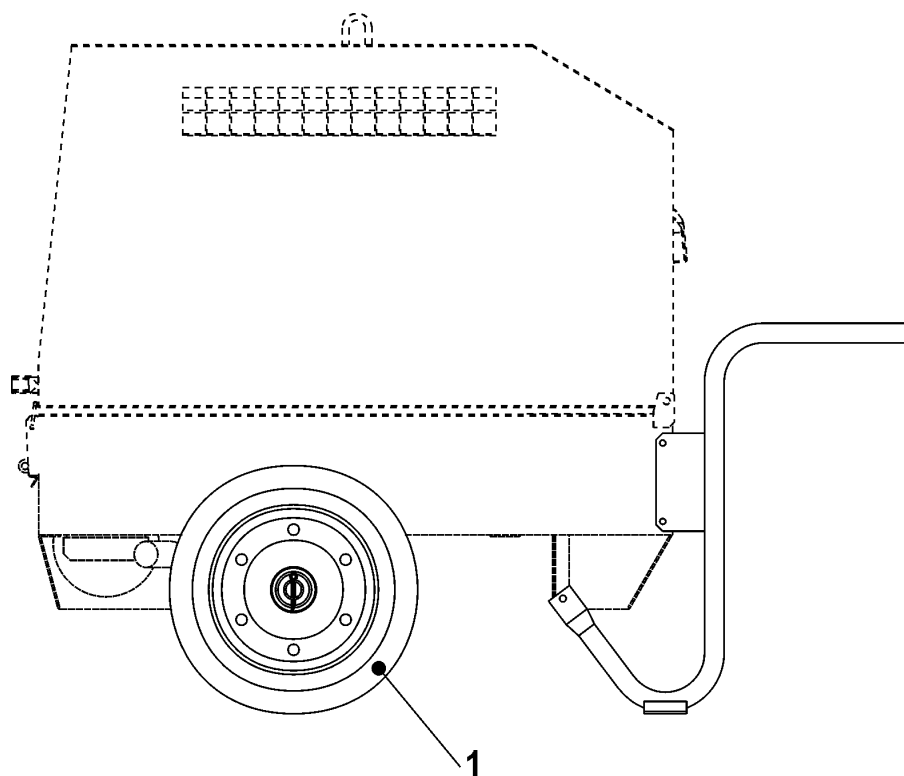




POS.	CODE	POS.	CODE
5	HP007C030	19	232027036
7	102013290	20	105111540
8	102042740	21	232027130
11	1302040	22	256607297
13	1291120	23	356707297
14	307759045	24	105511860
15	107302460	25	256607251
16	205187330	26	306467107
18	356707350	36	356707020



POS.	CODE	POS.	CODE	POS.	CODE	POS.	CODE
50	372808121	58	256602228	66	356722050	75	372821031
51	307018024	59	HP0072200	67	309509005 (QM)		
52	372809875	60	372802212	69	372802139		
53	372802026	61	372808115	70	102302280 (QM)		
54	372822020	62	356721100	71	HP0071050		
55	356722070	63	356721046	72	356728200		
56	343339601	64	107300180	73	356708100		
57	356728005	65	MVP-U1	74	209702242		



POS.	CODE
1	102042490
2	372801234
3	372801235
4	372801160
5	6075020

MARTIN DIESEL INC.

Defiance, Ohio 43512

(3U737)

Phone 1 – 419 – 782 – 9911

Fax 1 – 419 – 782 – 6741

Internet – www.martindiesel.com

Email sales@martindiesel.com